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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/024,502	12/17/2001	Mark B. Rosenbluth	10559/619001 / P12858	4328
20985	7590	12/17/2004	EXAMINER	
FISH & RICHARDSON, PC 12390 EL CAMINO REAL SAN DIEGO, CA 92130-2081			ELMORE, STEPHEN C	
			ART UNIT	PAPER NUMBER
			2186	

DATE MAILED: 12/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/024,502

Applicant(s)

ROSENBLUTH ET AL.

Examiner

Stephen Elmore

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>6-29-04, 7-1-04</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

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## **DETAILED ACTION**

1. This Office action responds to the application filed 12-17-2004.
2. Claims 1-14 are presented for examination.
3. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Information Disclosure Statement***

4. The information disclosure statement filed 7-01-2004 fails to comply with 37 CFR 1.98(a)(2) in regard to the following listed references, which requires a legible copy of each foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed.

a. The following listed foreign patent documents AC, AD and AE, were not actually received with this information disclosure statement, have not been "image" scanned and so are not available for review, i.e.,

<u>ID</u>	<u>Document</u>
AC	WO 01/50679,
AD	WO 01/50247,
AE	WO 01/48619.

For this reason, the initialed IDS form shows these references as "lined-through" to indicate that they were not considered.

### ***Drawings***

5. The drawings are objected to because:
  - a. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following features must be shown or the feature(s) canceled from the claim(s).

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i. claims 1-3, "a write queue descriptor count instruction" and related (claimed) features;

ii. claim 9, "a queue manager programming engine";

iii. claim 10, "a plurality of microengines".

No new matter should be entered.

b. Figure 1 is objected-to because element 10 is described in the specification, page 2, line 7, as being a "network system 10", which element scope should encompass all the sub-elements making up Figure 1, but, element 10 of Figure 1 is described on page 5, line 21, as being a "network device 10," which scope should encompass only a portion of the elements shown in the figure since the source and destination elements of the network should not be included within the scope of the network device itself, and because a "system" is not equivalent to a "device," therefore, the contents of Figure 1 is inconsistent with these teachings of the specification;

c. Figure 4 is objected-to because element 74 is labeled "Datapath element" in the figure, while it is described as a "processing element" in the specification, page 5, line 23, therefore, the contents of Figure 4 are not consistent with the teachings of the specification;

d. Figure 4 is objected-to because in the description of Figure 4 in the specification, page 5, lines 20-21, the description says the contents of the figure relate (re: the term "implemented") to the network device 10 and to a processor, that is, it says these things are shown in the figure, however, the figure does not show what is described, so the drawing does not correspond to the description in the specification pertaining to this figure;

e. Figure 5 is objected-to because (see specification, page 6, lines 19-21) elements 86 and 88 are labeled incorrectly, reversed, when compared to the description.

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6. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR § 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

7. The disclosure is objected to because of the following informalities:
- a. The title of the invention is not descriptive. A new title is required that is clearly indicative of the *invention* to which the claims are directed. The claims are not indicative of, or directed to, the generic title "Congestion Management for High Speed Queuing" which clearly describes only a desired goal of the present invention and is not a description of any novel features of the present invention itself.

See MPEP § 606.01, "Where the title is not descriptive of the invention claimed, the examiner should require the substitution of a new title that is clearly indicative of the invention to which the claims are directed."

Appropriate correction is required.

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b. The abstract of the disclosure is objected to because the first sentence is non-idiomatic English. Correction is required. See MPEP § 608.01(b).

c. In the specification, page 3, lines 16-23, it is not clear what active element of the present invention executes the "commands" discussed here, it is unknown whether it is the processor or the memory controller, or both, or none, the specification is silent;

d. The specification is objected to because of the following informalities:

i. element 10 of Figure 1 is described in the specification, page 2, line 7, as being a "network system 10", but, element 10 of Figure 1 is described on page 5, line 21, as being a "network device 10," the specification is inconsistent;

ii. element 74 of Figure 4 is labeled "Datapath element" in the figure, but it is described as a "processing element" in the specification, page 5, line 23, the specification is inconsistent;

iii. as to the description of Figure 4 in the specification, page 5, lines 20-21, the description says the contents of the figure relate (re: the term "implemented") to the network device 10 and to a processor, however, the figure does not agree with what is described, the specification is inconsistent;

iv. page 5, lines 11-12, the language "the linked list 30" conflicts with the description of "the next element 30" -- because "linked list 30" contains all the elements, therefore, the "next element" in 30 cannot itself be labeled "30";

v. as to Figure 5, and the specification, page 6, lines 19-21, elements 86 and 88 are labeled incorrectly, they are reversed from what is described in the specification.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

8. The following is a quotation of the second paragraph of 35 U.S.C. § 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 4-14 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims are indefinite because:

a. Claim 4 is incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are:

those individual steps which taken together comprise the claimed activity of "maintaining a count field"; this feature encompasses a scope of activity which is not known because the scope of "maintaining" has not been clearly identified or defined in the claim, since the term "maintaining" is not a recognized term in the art of processor functionality;

b. Claim 11 is indefinite because the language "maintain a count field" does not sufficiently describe the actual activity performed on, or in regard to the count field, because the scope of the term "maintain" has not been clearly identified or defined in the claim, and the activity "maintain" is not a recognized term in the art of processor functionality;

c. Claims 5 and 12 are indefinite because the language "the count field is a word" is not clear for two reasons:

i. first, "word" in a claim without more information is overly broad because the scope depends on the processor architecture in which the "word" is used, however, this feature is not present in the claim, so "word" without more information in the claim is indefinite, but for purposes of compact prosecution will be taken to mean any amount of data bits;

ii. second, this language is not technically accurate, a "count field" is not equivalent to a "word" - these are different entities, one cannot "be" the other;

d. Claim 9 is indefinite because the language "a queue manager programming engine" is not a term in the art, it is not defined in the claim or specification, and does not appear to have any functional relationship to any "programming" feature, or aspect, with the remaining limitations in the body of the claim, such that there appears to be missing parts or structure, therefore, it's scope of meaning cannot be ascertained;

e. Claims 6-8, 10 and 12-14 inherit the deficiencies of the preceding claim.

***Claim Rejections - 35 USC § 101***

10. 35 U.S.C. § 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

11. Claims 1-3 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1-3 are directed towards "a computer instruction," *per se*, interpreted to be nothing more than non-functional descriptive language. The reason for this interpretation is that the scope of coverage of these claims encompass the description of this computer instruction and the details of it's potential functionality printed, for example, on paper in a technical disclosure intended for human comprehension, which scope is clearly not patentable subject matter since the claimed computer instruction is not being claimed as being, or having been, stored on a computer readable medium, nor is the computer instruction being claimed as being executed by a processor, therefore, the scope of coverage of this language encompasses only the claimed computer instruction itself, that is, *per se*, since none of the claimed activities purported to be accomplished by the computer instruction are, or can be, actually physically



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accomplished by the instruction alone (the instruction is not claimed as being executed so it is not being performed in the claim).

***Claim Rejections - 35 USC § 102***

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

13. Claims 4-6 are rejected under 35 U.S.C. § 102(e) as being anticipated by Wolrich et al., US 2003/0110166, ("Wolrich").

Wolrich teaches the claimed invention as a queue management method, comprising:

Claim 4,

a. the limitation, in a processor, maintaining a count field for queue descriptors of active output queues current in a memory, is taught, see paras [0010-0017], as a "network processor," "queue descriptors," and "queue count";

Claim 5,

b. the count field is a word, is taught, see [0015], as a "word" of 7 bits;

Claim 6,

c. the limitation, writing the count field subsequent to incrementing a count of buffers for a selected queue, is taught, see Fig. 3A and [0020], as incrementing the queue count by one, and also taught in claim 17 of the reference in the limitation, "modify the linked list...based on the cell count..." which writes the count field after the count is incremented.

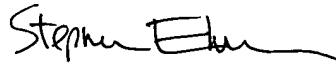
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***Conclusion***

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen Elmore whose telephone number is (571) 272-4180. The examiner can normally be reached on Mon-Fri from 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Kim can be reached on (571) 272-4182. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Stephen Elmore  
Primary Examiner  
Art Unit 2186

December 10, 2004